

English translation of the amended sheets of  
International Preliminary Examination Report

CLAIMS

1. Actuation device comprising at least two  
motors (15, 16) placed side by side on the same part  
5 (4), without prolonging each other in a long principal  
direction, motor shafts (17, 18) along the same  
direction starting from the motors and in the long  
principal direction of the motors, at least two pulleys  
(12, 13) at least essentially coaxial and actuated by  
10 the motors, in which the pulleys (12, 13) are offset  
along the motor shafts and in that the motor shafts  
have portions that engage (24, 25) on the pulleys that  
are also offset.

2. Device according to claim 1,  
15 characterised in that the pulleys are perfectly  
coaxial, and the motor shaft portions that engage on  
the pulleys form bulges on the shafts.

3. Device according to claim 2,  
characterised in that the motor shafts are supported by  
20 a reinforcement (19) fixed to the part (4), that  
comprises a pair of bearings (20, 21) aligned with the  
motor shafts and supporting their free ends.

4. Articulated arm comprising a base (3), a  
train of segments (4, 5, 6) and links (9, 10) between  
25 the segments and the base, and corresponding link  
actuation devices, two of the said actuation devices  
(15, 16) including motors fixed side by side on a  
segment (4) without prolonging each other in a long  
principal direction, motor shafts (17, 18) along the  
30 same direction starting from the motors and in the long  
principal direction of the motors, at least essentially

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coaxial pulleys (12, 13), and mechanical transmissions joining the pulleys to the links (9, 10) actuated by the said two actuation devices, in which the motor shafts are supported by a reinforcement (19) fixed to the segment (4), the pulleys (12, 13) are offset along the motor shafts, and the motor shafts have portions (24, 25) that engage on the pulleys that are also offset.

5. Articulated arm according to claim 4, characterised in that the pulleys are perfectly coaxial, motor shaft portions that engage on the pulleys forms bulges on the motor shafts, and the reinforcement comprises a pair of bearings (20, 21), aligned with the motor shafts, supporting the motor shaft free ends.